Indiana Epidemiology Newsletter

Volume 16, Issue 11 November 2008

Revised Communicable Disease Reporting Rule Effective December 12, 2008

The revised *Indiana State Department of Health (ISDH) Communicable Disease Reporting Rule for Physicians, Hospital and Laboratories* (410 IAC 1-2.3) became effective December 12, 2008. After extensive review, the rule has several changes. The 2008 rule follows the same basic format as the previous one with 1) definitions, 2) reporting requirements for physicians, hospitals, and laboratories, 3) public health interventions (including responsibility to investigate and confidentiality), and 4) disease specific control measures. A direct link to the complete 2008 Communicable Disease Reporting Rule can be found at the Indiana State Department of Health (ISDH) web site at http://www.in.gov/isdh/files/comm_dis_rule.pdf.

A quick reference list of reportable communicable diseases and conditions and reportable laboratory results can be found on the ISDH web site at http://www.in.gov/isdh/files/Communicable_Disease_Rule_Reportable_List_Dec2008.pdf

Major changes to the revised 2008 rule are listed below. Since not all changes to the rule are listed, it is strongly recommended that:

- Each person who is affected by the rule should review it in its entirety.
- When initially investigating a specific disease/condition, review the disease specific section closely for new or changed requirements and interventions.

Some important components of the rule remained unchanged:

- Physicians and hospitals must still report cases within required time frames. Most conditions are reportable immediately or within 72 hours. See Section 47 of the rule for specific information on individual diseases/conditions.
- Laboratories shall continue to report evidence of infections at least weekly to the ISDH. Infections that are reportable can be found in the specific section of the rule for medical laboratory reporting requirements (Section 48).

- Case reports submitted to the local health department or the ISDH may be used for epidemiological investigation or other disease intervention activities as warranted. ***Prior approval from a patient is not required before releasing medical or epidemiological information to the local health department or the department.***

- The Confidential Report of Communicable Diseases, in paper form or the electronic Indiana National Electronic Disease Surveillance System (INEDSS) form, remains unchanged.

- Investigation forms for local health departments not currently using INEDSS as their reporting/investigation system remain located on the ISDH web site at http://www.in.gov/isdh/19042.htm#Communicable_Disease.

- The process for local health departments, hospitals, and other agencies using INEDSS as their investigational tool has not changed. The INEDSS program will be making major moves forward in 2009, so please review all INEDSS communications as they are released.

For more information, contact the ISDH Surveillance and Investigation Division at 317-233-7125.

Major Changes to the Communicable Disease Reporting Rule (410 IAC 1-2.3)

- Diseases and Conditions that have been added and are now reportable:

  Dengue and Dengue Hemorrhagic Fever (Section 65)
  Giardiasis (Section 66.5)
  Hepatitis, viral, Type E (Section 74.5)
  Influenza-Associated Death (Section 76.5)
  Neonatal Herpes (Section 87.5)
  Powassan (type of arboviral encephalitis) (Section 65)
  Severe *Staphylococcus aureus* in a previously health person (Section 98)
  Varicella (chickenpox) - all cases reportable (Section 110)
  Vibriosis (Section 110.5)

- Diseases and Conditions that are no longer reportable:

  Aseptic Meningitis (Section 84 repealed)
  Pediatric Blood Lead Levels (Section 87 repealed)
  A new rule regarding the reporting, monitoring and prevention of lead poisoning was adopted in 2007. This rule can be found at http://www.in.gov/legislative/iac/T04100/A00290.PDF

- Section 47 (b) requires physicians and hospitals to report cases to the local health department of the county or city in which the patient normally resides.

- Section 48 (b) adds laboratory reporting requirements such as the laboratory's accession number or numeric identifier and CLIA ID number.

- Section 48 (c) amends reporting requirements for laboratories when a specimen is identified by a numeric identifier code and not by the name of the patient.

- Section 49 (g) identifies the ISDH as a public health authority as defined by the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Privacy Rule. The department is authorized to receive protected health information, wherever maintained, without patient authorization for the purposes of public health surveillance, investigation, interventions, and as otherwise permitted by law.

- Several disease specific sections add and/or modify control measures for schools, daycare facilities, preschools, health care facilities and food handlers (See disease specific section for control measures).

ERC Welcomes New Staff Members

In recent months, five new epidemiologists have joined the Indiana State Department of Health (ISDH) Epidemiology Resource Center Surveillance and Investigation Division. In addition, epidemiologists Wayne Staggs was promoted to the Antibiotic Resistance Epidemiologist position, and Ryan Gentry was promoted to the Syndromic Surveillance Epidemiologist position.

Dana Hazen (Invasive Disease Epidemiologist)

Dana Hazen became the new Invasive Disease Epidemiologist, the position formerly occupied by Wayne Staggs, on November 5. She was previously employed with the Louisville Metro Department of Public Health and Wellness, where she served as a supervisor in community health. Dana received her BSN from Valparaiso University and her MPH from the University of Kentucky. Dana is happy to return to her hometown of Indianapolis.

Jim Ignaut (Field Epidemiologist District 9)

Jim Ignaut has worked as the Field Epidemiologist for District 9 since October 6, 2008. Jim has Master's Degrees in Psychology and Public Health and is a Certified Health Education Specialist. Earlier in his career, his professional focus included working with patients and clients with a spectrum of psychological disorders and conditions. Prior to being appointed to his position as a Field Epidemiologist, Jim worked for seven years on a National Institute of Health diabetes clinical research study, which focused on how to delay and prevent the onset of Type 2 Diabetes. From 2003-2006, Jim was the Program Manager for Indiana Local Health Department Infrastructure Development. For the past two years, he served as the Indiana State Department of Health Genomics Program Education Coordinator.

James Michael (Quality Assurance Epidemiologist)

James Michael is returning to his role as Quality Assurance Epidemiologist, the position formerly occupied by Ryan Gentry, on October 6, after several years as a stay-at-home dad. James was previously employed at ISDH from 2003-2005. Prior to moving to Indiana, James was responsible for the analysis of hospital quality improvement information and data from the Medicare Health Outcomes Survey while working at the Centers for Medicare & Medicaid Services (formerly HCFA) in Baltimore, MD. James has an MS degree in Community Health with an emphasis in epidemiology from the University of Illinois Urbana-Champaign.

Sara Sczesny (Hepatitis C Epidemiologist)

Sara Sczesny, MPH, joined the ISDH on September 8 as the Hepatitis C Epidemiologist. Sara previously worked as a certified medical technologist in the clinical laboratory setting. As the Hepatitis C Epidemiologist, Sara will conduct surveillance and outbreak investigations of hepatitis C disease, provide training, and collaborate with other partners as needed. Sara received her MPH with a concentration in epidemiology from the Indiana University (Indianapolis) Department of Public Health in 2008.

Amie ThurdeKoos (Enteric Epidemiologist)

Amie May ThurdeKoos joined the ISDH as the new enteric disease epidemiologist on October 6 after previously working in Denver, CO. Her public health experience includes working as a surveillance epidemiologist for several years as part of the National Antimicrobial Resistance Monitoring System (NARMS) for enteric bacteria at the Centers for Disease Control and Prevention (CDC) which was preceded by work as a district epidemiologist in metro-Atlanta. Amie received her BA from DePauw University, her MSBS in biochemistry and molecular biology from the Medical College of Ohio, her MPH in epidemiology from Emory University, and is a PhD candidate in public health/epidemiology from Walden University.

A Look Back At Typhoid Mary

Stephanie English, MPH
ISDH Field Epidemiologist, District 6

Typhoid fever is a highly infectious disease caused by *Salmonella typhi*, a strictly human pathogen. It multiplies in the small intestine and is excreted in feces. Infection is usually transmitted through contaminated food (from an infected food preparer's unwashed hands) or water (from infected fecal matter leaching into ground water sources). Onset of disease is marked by sudden and prolonged fever that can reach 104° or 105°F. Severe headaches follow, accompanied by gut-wrenching nausea and lack of appetite. Victims often develop bad coughs, hoarseness, diarrhea, or constipation, often in concert with skin rashes, inflammation, and abdominal tenderness.

Born in 1869, Mary Mallon came to the United States in search of a better life. An Irish immigrant, she arrived in New York in 1884 and earned her living as a cook between 1900 and 1907. She often traveled with the families for whom she'd cooked in the city to their rural vacation spots.

She had been working in a house in Mamaroneck, NY for less than two weeks when the residents came down with typhoid. She moved to Manhattan in 1901 and members of the family for whom she worked there developed fevers and diarrhea, and the laundress died. She then went to work for a lawyer until seven of the eight household members developed typhoid. Mary spent months helping to care for the people she had made sick, but her care further spread the disease throughout the household. In 1906, she took a position in Long Island. Within two weeks, six out of eleven family members were hospitalized with typhoid. She changed employment again and three more households were infected.

Investigations into her whereabouts revealed that she had often been employed in homes that then had an outbreak of typhoid fever. Researcher George Soper approached Mallon with the news she was possibly spreading typhoid, she adamantly rejected his request for urine and stool samples. Soper left and later published his findings in the June 15, 1906 issue of the *Journal of the American Medical Association*.
On his next contact with her, he brought a doctor with him, but was again turned away. Mallon's denials that she was a carrier were based in part on the diagnosis of a reputable chemist who had found she was not harboring the bacteria. It is possible she was in temporary remission when tested. Moreover, when Soper first told her she was a carrier, the concept that a person could spread disease and remain healthy was not well known.

Mary was eventually located, determined to be the cause of those outbreaks, and detained by the New York Board of Health. She was exiled to the Riverside Hospital on North Brother Island in 1907 for an indefinite period of time and finally released in 1910. Though she was still a typhoid carrier, the new health commissioner deemed that keeping her incarcerated was cruel and pointed out that others in her situation were not being treated the same way. He trusted that she now knew the importance of maintaining a constant state of personal cleanliness, and that she understood she was to never again work as a food preparer.

The New York City Health Department sent Dr. Sara Josephine Baker to talk to Mary, but by that time she was convinced that the law was wrongly persecuting her when she had done nothing wrong. A few days later, Baker arrived at Mary's place of work with several police officers and took her into custody. The New York City health inspector investigated and found her to be a carrier. She was isolated for three years at a hospital located on North Brother Island, and then released on the condition she would not prepare food.

In January, 1915 (nearly five years after her release), the Sloane Maternity Hospital in Manhattan suffered a typhoid fever outbreak. Mallon had obtained employment under the name Mrs. Brown. Twenty-five people became ill and two of them died. At this time, Mallon knew her healthy carrier status, even if she didn't believe it; thus she willingly and knowingly spread infection to her victims. Using a pseudonym made even more people feel that Mallon knew she was guilty. She was sent back to North Brother Island, and there she lived out the final 23 years of her life. In 1938 she died from complications of a stroke she had suffered six years earlier. She was 69.

Mary's intense denial that she could be a carrier created many of her problems. She maintained that she was healthy and had never had typhoid fever. An autopsy found evidence of live typhoid bacteria in her gallbladder. Some historians say it also stemmed from the prejudice that existed against working-class Irish immigrants at the time. In total, Mallon was responsible for about 33 cases of typhoid fever and three deaths. Today, *Typhoid Mary* is a generic term for a carrier of a dangerous disease who is a danger to the public because of refusal to take appropriate precautions.

Bibliography

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Indiana State Department of Health
Refugee Health Coordinator

Tina Feaster
Tuberculosis Epidemiologist

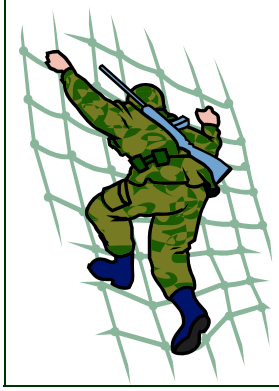
Helen Townsend
Refugee Health Coordinator

The numbers of refugees resettling in Indiana increased significantly in the past couple of years, from 367 in 2006 to 1533 in 2007. To address the public health care needs of refugees, Helen Townsend joined the ISDH on December 31st, 2007 as the new Refugee Health Coordinator.

Most of the refugees that currently arrive in Indiana are Burmese and represent Chin and Karen ethnic groups. The majority of the refugees are resettling in Allen and Marion counties. The United Nations defines a refugee as any person who is living outside of the country of nationality or, in the case of a person having no nationality, is outside any country in which such person last habitually resided, and who is unable or unwilling to return to, and is unable or unwilling to avail himself or herself of the protection of, that country because of persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion.

Refugees are required to have a medical evaluation submitted with their visa application, and they carry that with them to the United States. Upon the refugee's arrival to the U.S., the Centers for Disease Control and Prevention (CDC) sends a copy of this evaluation to the Refugee Health Coordinator in the state of the refugee's destination. In Indiana, Helen receives these forms and forwards them to the appropriate county. Refugees are medically evaluated again through the local health department in their county of residence. In addition to getting a medical screening, finding a job, and learning English, refugees are also required to pay back their plane fare to the U.S. After one year of living in the US, they are required to apply for Legal Permanent Resident, or "green card" status.

Helen works closely with the Allen and Marion County refugee programs as well the resettlement agencies in Indianapolis and Fort Wayne, and she also collaborates with the State Refugee Coordinator from the Family & Social Services Administration (FSSA). For more information about refugees in Indiana, contact Helen Townsend at 317.233.1321.



Training Room

INDIANA STATE DEPARTMENT OF HEALTH IMMUNIZATION PROGRAM PRESENTS:

Immunizations from A to Z

Immunization Health Educators offer this FREE, one-day educational course that includes:

- Principles of Vaccination
- Childhood and Adolescent Vaccine-Preventable Diseases
- Adult Immunizations
    - Pandemic Influenza
- General Recommendations on Immunization
    - Timing and Spacing
    - Indiana Immunization Requirements
    - Administration Recommendations
    - Contraindications and Precautions to Vaccination
- Safe and Effective Vaccine Administration
- Vaccine Storage and Handling
- Vaccine Misconceptions
- Reliable Resources

This course is designed for all immunization providers and staff. Training manual, materials, and certificate of attendance are provided to all attendees. Please see the Training Calendar for presentations throughout Indiana. Registration is required. To attend, schedule/host a course in your area or for more information, please reference **http://www.IN.gov/isdh/programs/immunization.htm.**

ISDH Data Reports Available

The following data reports and the *Indiana Epidemiology Newsletter* are available on the ISDH Web Page:

http://www.IN.gov/isdh/

HIV/STD Quarterly Reports (1998-June 2006)	Indiana Mortality Report (1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)
Indiana Cancer Incidence Report (1990, 1995, 1996, 1997, 1998)	Indiana Infant Mortality Report (1999, 2002, 1990-2003)
Indiana Cancer Mortality Report (1990-1994, 1992-1996)	Indiana Natality Report (1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)
Combined Cancer Mortality and Incidence in Indiana Report (1999, 2000, 2001, 2002, 2003, 2004)	Indiana Induced Termination of Pregnancy Report (1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Health Behavior Risk Factors (1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)	Indiana Marriage Report (1995, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004)
Indiana Health Behavior Risk Factors (BRFSS) Newsletter (9/2003, 10/2003, 6/2004, 9/2004, 4/2005, 7/2005, 12/2005, 1/2006, 8/2006, 10/2006, 5/2007, 12/2007, 4/2008, 7/2008)	Indiana Infectious Disease Report (1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Hospital Consumer Guide (1996)	Indiana Maternal & Child Health Outcomes & Performance Measures (1990-1999, 1991-2000, 1992-2001, 1993-2002, 1994-2003, 1995-2004, 1996-2005)
Public Hospital Discharge Data (1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)	Assessment of Statewide Health Needs – 2007

HIV Disease Summary

Information as of October 31, 2008 **(based on 2000 population of 6,080,485)**

HIV - without AIDS to date:

351	New HIV cases from November 2007 thru October 31, 2008	12-month incidence	6.10 cases/100,000
3,825	Total HIV-positive, alive and without AIDS on October 31, 2008	Point prevalence	66.50 cases/100,000

AIDS cases to date:

411	New AIDS cases from November 2007 thru October 31, 2008	12-month incidence	7.14 cases/100,000
4,188	Total AIDS cases, alive on October 31, 2008	Point prevalence	72.81 cases/100,000
8,780	Total AIDS cases, cumulative (alive and dead) on September 30, 2008		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in October *MMWR* Weeks 40-44		Cumulative Cases Reported January – October *MMWR* Weeks 1-44	
	2007	2008	2007	2008
Aseptic Meningitis	56	37	236	221
Campylobacteriosis	43	56	391	562
Chlamydia	1,664	1,474	15,759	15,099
Cryptococcus	3	0	18	16
Cryptosporidiosis	20	21	87	166
E. coli, shiga toxin-producing	32	5	89	78
Haemophilus influenzae, invasive	5	8	50	65
Hemolytic Uremic Syndrome (HUS)	0	0	0	1
Hepatitis A	8	4	27	21
Hepatitis B	6	10	47	38
Histoplasmosis	16	2	84	61
Influenza Deaths (all ages)	Not Reportable	0	Not Reportable	15
Gonorrhea	787	633	6,758	6,150
Legionellosis	6	3	50	41
Listeriosis	3	0	15	6
Lyme Disease	2	2	44	35
Measles	0	0	0	0
Meningococcal, invasive	4	1	24	23
Mumps	0	0	1	1
Pertussis	5	40	52	87
Rocky Mountain Spotted Fever	0	0	5	6
Salmonellosis	82	66	591	531
Shigellosis	37	21	118	549

REPORTED CASES of selected notifiable diseases (cont.)

Disease	Cases Reported in October *MMWR* Weeks 40-44		Cumulative Cases Reported January – October *MMWR* Weeks 1-44	
	2007	2008	2007	2008
Group A Streptococcus, invasive	4	6	102	118
Group B Streptococcus, Newborn	2	2	24	22
Group B, Streptococcus, invasive	32	38	225	269
Streptococcus pneumoniae (invasive, all ages)	44	49	456	667
Streptococcus pneumoniae (invasive, drug resistant)	19	14	145	179
Streptococcus pneumoniae (invasive, <5 years of age)	7	7	40	55
Syphilis (Primary and Secondary)	4	10	38	103
Tuberculosis	6	7	103	100
Yersiniosis	0	0	13	6
Animal Rabies	2 (bata)	3 (bat)	12 (bats)	10 (bats)

For information on reporting of communicable diseases in Indiana, call the *Surveillance and Investigation Division* at 317.233.7125.

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Cover photo of Cryo-EM reconstruction of a norovirus capsid.courtesy of Dr. B.V.V. Prasad, Baylor College of Medicine, Houston, TX 77030

The *Indiana Epidemiology Newsletter* is published monthly by the Indiana State Department of Health to provide epidemiologic information to Indiana health care professionals, public health officials, and communities.